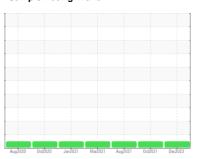


# **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id 6650 Component

**Diesel Engine** 

DIESEL ENGINE OIL SAE 15W40 (--- QTS)

### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

Metal levels are typical for a new component breaking in.

## Contamination

There is no indication of any contamination in the

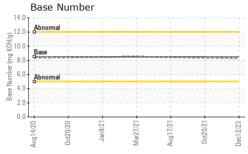
## **Fluid Condition**

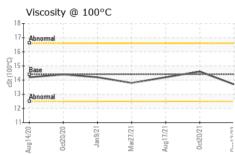
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

			، صعد	كزك كزك كزك		
		Aug2020	Oct2020 Jan2021	Mar2021 Aug2021 Oct2021	Dec2023	
SAMPLE INFORM	NOITAN	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0871026	WC0603343	WC0576852
Sample Date		Client Info		12 Dec 2023	20 Oct 2021	17 Aug 2021
Machine Age	hrs	Client Info		450	0	0
Oil Age	hrs	Client Info		450	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	3	6	8
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	5	6
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	1	1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Antimony	ppm	ASTM D5185m			0	5
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	8	7	6
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	55	59	54
Manganese	ppm	ACTA DE LOS		-	00	54
Magnasium		ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m ASTM D5185m	450			
Calcium			450 3000	<1	<1	<1
	ppm	ASTM D5185m		<1 796	<1 1039	<1 890
Calcium	ppm	ASTM D5185m ASTM D5185m	3000	<1 796 1101	<1 1039 1240	<1 890 1135
Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150	<1 796 1101 940	<1 1039 1240 999	<1 890 1135 978
Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350	<1 796 1101 940 1057	<1 1039 1240 999 1168	<1 890 1135 978 1079
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250	<1 796 1101 940 1057 2876	<1 1039 1240 999 1168 4297	<1 890 1135 978 1079 2641
Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	3000 1150 1350 4250 limit/base	<1 796 1101 940 1057 2876  current	<1 1039 1240 999 1168 4297 history1	<1 890 1135 978 1079 2641 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	3000 1150 1350 4250 limit/base >25	<1 796 1101 940 1057 2876  current 3	<1 1039 1240 999 1168 4297 history1	<1 890 1135 978 1079 2641 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158	<1 796 1101 940 1057 2876  current 3 1	<1 1039 1240 999 1168 4297 history1 4	<1 890 1135 978 1079 2641 history2 4
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m MSTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158 >20	<1 796 1101 940 1057 2876  current 3 1	<1 1039 1240 999 1168 4297 history1 4 1	<1 890 1135 978 1079 2641 history2 4 1
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158 >20 limit/base	<1 796 1101 940 1057 2876  current 3 1 0  current	<1 1039 1240 999 1168 4297 history1 4 1 4	<1 890 1135 978 1079 2641 history2 4 1 7
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	<1 796 1101 940 1057 2876  current 3 1 0  current 0.4	<1 1039 1240 999 1168 4297 history1 4 history1 0.2	<1 890 1135 978 1079 2641 history2 4 1 7 history2
Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium  INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D5185m  Method *ASTM D7844 *ASTM D7624	3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	<1 796 1101 940 1057 2876  current 3 1 0  current 0.4 6.9	<1 1039 1240 999 1168 4297 history1 4 1 4 history1 0.2 7.2	<1 890 1135 978 1079 2641 history2 4 1 7 history2 0.2 7.6
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D7844 *ASTM D7624 *ASTM D7415	3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20 >3	<1 796 1101 940 1057 2876  current 3 1 0  current 0.4 6.9 18.6	<1 1039 1240 999 1168 4297 history1 4 1 4 history1 0.2 7.2 19.1	<1 890 1135 978 1079 2641 history2 4 1 7 history2 0.2 7.6 19.9



## **OIL ANALYSIS REPORT**





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
ELLIID DDODEDT	mothod	limit/bass	ourropt	hiotory1	history?	

I LOID I NOI LI	TILO	memou			HISTOLAL	HISTOLYZ
Visc @ 100°C	cSt	ASTM D445	14.4	13.7	14.6	14.2

GRAPHS	;											
Iron (ppn	n)					Lea	d (ppm	)				
Severe						80 Sever	е					
Abnormal						Ed 40 Abno						
Abnoma						40 Abno	illiai					
	-			-		0	- 0					-
Aug 14/20 Oct20/20	Jan 9/21.	Mar27/21	Aug17/21.	Oct20/21	Dec12/23	Aug14/20	0ct20/20	Jan9/21	Mar27/21	Aug17/21.	Oct20/21	0001000
~ Aluminun	n (ppm)					Chr	omium	(ppm)				
Severe						50 Sever	e					
						30 Abno						
Abnormal			1			20 - Abno	rmai					
					3	0	-					
Aug 14/20 Oct20/20	Jan9/21.	Mar27/21	Aug17/21.	Oct20/21	Dec12/23	Aug14/20	0ct20/20	Jan9/21	Mar27/21	Aug17/21.	Oct20/21	C0/010/00
Copper (¡	ppm)					Silic	on (pp	m)				
Severe Abnormal						80 Sever						
						E 40						
						Abno	rmal					
						0	_			_		
Aug 14/20 Oct20/20	Jan9/21.	Mar27/21	Aug17/21.	0ct20/21	Dec12/23	Aug14/20	0ct20/20	Jan9/21	Mar27/21	Aug17/21.	0ct20/21	Dav12/22
√iscosity			A	Ü	ā		e Numl		2	A	Ü	-
Abnormal						15.0						
Base						OX Base						rererer
Abnormal			1			Abno Base William Programmer (mg KOH/g) Base Same Programmer (mg KOH/g)	rmal			-		
						0.0 Base						
4/20 -	19/21	12/21	7/21-	20/21	2/23	4/20	0/20	12/51	12/21	7/21-	20/21	6





Laboratory

Sample No. : WC0871026 Lab Number : 06098192 Unique Number : 10896422

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 23 Feb 2024 **Tested** : 25 Feb 2024 Diagnosed : 25 Feb 2024 - Wes Davis

Test Package : MOB 1 ( Additional Tests: TBN )

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

To discuss this sample report, contact Customer Service at 1-800-237-1369.

**INTERSTATE WASTE-CHESTER** 

Contact/Location: ROB CLARKE - INTCHE

89 BLACK MEADOW RD CHESTER, NY

US 10918

Contact: ROB CLARKE rclarke@interstatewaste.com

T: F: (845)572-3301

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)